

THANAWAT LODKAEW

(+66)868682481 [◇ lodkaew.thanawat@gmail.com](mailto:lodkaew.thanawat@gmail.com)

<https://skydddoogg.github.io/>

EDUCATION

King Mongkut's Institute of Technology Ladkrabang (KMITL)

Graduation year: 2020

Faculty of Information Technology

- BSc in Information Technology
- Cumulative GPA: 3.76 (4.00 scale)

EXPERIENCE

Undergraduate Researcher

Since 2017

Data Science and Machine Learning Research Laboratory (DSMLR), KMITL

*Supervised by Prof. **Kitsuchart Pasupa***

- Having proposed a new loss function for learning imbalanced data. The proposed loss is a hybridization of two well-performing loss functions, mean false error and focal loss. This is my senior project.
- Having proposed a computer-vision-based approach for heat detection in cows.
- Having proposed an approach for retrieving similar visual objects by utilizing CNN features for similarity measurement and using object-segmented images instead of object-cropped images for better results.

Research Intern

Summer 2019

Vision and Learning Laboratory, Vidyasirimedhi Institute of Science and Technology (VISTEC)

*Supervised by Prof. **Supasorn Suwajanakorn***

- Having proposed a deep-learning-based framework for removing furniture objects in a room image. The framework uses an image inpainting technique to perform the task.
- Having contributed to an exciting project related to machine-learning-based framework for human-robot communication.

Exchange Student

Summer 2018

National Institute of Technology, Kurume College

*Supervised by Prof. **Yoshimitsu Kuroki***

- Having researched for an improvement of the Saak transform using convex optimization on sparse representation.

EXTRACURRICULAR ACTIVITY

Deep Learning and Artificial Intelligence Winter School 2017

Organized by The Asia Pacific Neural Network Society (APNNS)

- Having gained knowledge about several aspects of deep learning and artificial intelligence such as deep CNN neocognitron for artificial vision, randomized algorithms, swarm search and deep learning for emotion.

Workshop on Introduction to Social Computing

Organized by Prof. Irwin King

- Having gained knowledge about collecting, extracting, accessing, processing, computing and visualizing social signals and information.
- Having had a clear understanding of the fundamentals of recommendation system.

PUBLICATIONS

1. **Thanawat Lodkaew** and Kitsuchart Pasupa. Hybrid loss for improving classification performance with unbalanced data. In *International Conference on Neural Information Processing*, 2020. (under review)
2. Guntitatt Sawadwuthikul, Tanyatep Tothong, **Thanawat Lodkaew**, Jilamika Wongpithayadisai, Puchong Soisudarat, Sarana Nutanong, Poramate Manoonpong, and Nat Dilokthanakul. Visual goal human-robot communication framework for a robot waiter system. *IEEE Transactions on Industrial Informatics*, 2020. (under review)
3. Kitsuchart Pasupa and **Thanawat Lodkaew**. A new approach to automatic heat detection of cattle in video. In *International Conference on Neural Information Processing*, pages 330–337. Springer, 2019.
4. **Thanawat Lodkaew**, Weeruhputt Supsohmboon, Kitsuchart Pasupa, and Chu Kiong Loo. Fashion finder: A system for locating online stores on instagram from product images. In *2018 10th International Conference on Information Technology and Electrical Engineering (ICITEE)*, pages 500–505. IEEE, 2018.

AWARDS AND HONORS

Third Place , IST - FR 2019: Gateway to Informatics Research at EECi, <i>Thailand</i>	2019
Third Place , National Software Contest on Artificial Intelligence Application, <i>Thailand</i>	2018
Finalist , International ICT Innovative Services Contest, <i>Taiwan</i>	2017
Special Prize Award , NAPROCK International Programming Contest, <i>Japan</i>	2017
Finalist , TechJam Competition on Data Science Squad, <i>Thailand</i>	2017
Honorable Mention Award , MUICT DataHack, <i>Thailand</i>	2017

TECHNICAL STRENGTHS

Programming Language	Python, Java, C, MATLAB, Node.js, HTML/CSS
Technology	Tensorflow, Keras, PyTorch (preliminary), Linux, Flask, Google Cloud Platform, Git

REFERENCES

Assoc. Prof. Kitsuchart Pasupa
Faculty of Information Technology, King Mongkuts Institute of Technology Ladkrabang
Address: 1, Chalong Krung 1, Ladkrabang, Bangkok 10520
E-mail: kitsuchart@it.kmitl.ac.th